

Specifying Translated Works in Bibliographies

Jean-Michel HUFFLEN

... [The Tower of Babel:] In the middle of the precinct there was a tower of solid masonry, a furlong in length and breadth, upon which was raised a second tower, and on that a third, and so on up to eight. The ascent to the top is on the outside, by a path which winds round all the towers. When one is about half-way up, one finds a resting-place and seats, where persons are wont to sit some time on their way to the summit. On the topmost tower there is a spacious temple, and inside the temple stands a couch of unusual size, richly adorned, with a golden table by its side. [...]

Herodotus (ca 484 BC, ca 425 BC).

History, Book I (Clio), § 181, translated by George Rawlinson.

Abstract

First we recall the layout recommended within a bibliography for a translation of a document. Then we explain why entries for translated works cannot be specified nicely if we use `BIBTEX`. A solution is proposed for future implementation in `MIBIBTEX`.

Keywords Bibliographies, translated works, `BIBTEX`, cross-referencing, `MIBIBTEX`.

Sommario

L'articolo espone innanzitutto qual è il formato consigliato, all'interno di una bibliografia, per la traduzione di un documento. Viene poi spiegato perché le voci per le opere tradotte non possono essere specificate in maniera soddisfacente usando `BIBTEX`. Infine viene proposta una soluzione da implementare nelle future versioni di `MIBIBTEX`.

Parole chiave Bibliografie, opere tradotte, `BIBTEX`, riferimenti incrociati, `MIBIBTEX`.

1 Introduction

English has become the international language, especially in scientific topics, so most of books and articles in Mathematics, Computer Science, Physics, ... are written in English. Often the 'References' sections of such articles only list bibliographical items written in English, in order for these items to be usable by readers, supposed to understand English texts. Obviously, this point is not universal, very simple counterexamples being given by articles published in Italian by the `ArSTeXnica` journal. In such case, citing an Italian translation of an article or book orig-

inally written in English—or another language—may be more judicious, especially for Italian readers. Last, there is a domain where translations can indisputably be more accessible than original texts: that is History. An article using ancient texts as material—texts by ancient writers such as Herodotus or Thucydides—would probably be connected with a modern translation—possibly in a bilingual edition—rather than the original text only¹. In addition, such texts often have been translated several times, and some translations yielded actual 're-creations'², so knowing the edition and the translators' names with precision may be relevant within a bibliography.

In the next section, we recall how documents' translations should appear within the references of a bibliography. Let us also recall that when the `LATEX` word processor (Lamport, 1994) is used to typeset a document, 'References' sections are usually generated by the `BIBTEX` bibliography processor (Patashnik, 1988), from citation keys belonging to an auxiliary (`.aux`) file, some entries stored in bibliography database (`.bib`) files³, and a bibliography style ruling references' layout, written using the `bst` language described in Mittelbach et al. (2004, § 13.6). Section 3 shows that the specification of such translations using `BIBTEX`'s `.bib` format may yield *information redundancy*. Section 4 explains how we plan to solve this problem in `MIBIBTEX`⁴ (Hufflen, 2003), our multilingual reimplementation of `BIBTEX`. Reading this article only requires a basic practice of `LATEX` and `BIBTEX`. Section 4 also uses some notions related to XML⁵.

1. About the two examples of ancient writers given above, we personally studied ancient Greek at grammar school. Translating Herodotus' or Thucydides' texts is a worthwhile exercise if you are interested in ancient History. However, it requires a great amount of time, and when we were doing that, we often thought that when a Greek people living at this time asked to eat, he would probably be dead of starvation if, for his contemporaries, it took as much time as us to understand him. A strong argument for the availability of modern translation of such texts.

2. For example, there are many prose translations of *Odyssey*, an epic poem attributed to Homer. As different work, it has also been translated into French verse by Victor Bérard (1864–1931).

3. In this article, we refer to precise terminology, coming from `MIBIBTEX`'s (Hufflen, 2003): bibliographical *entries* are specified in `.bib` files, and bibliographical *references*—in `.bbl` files when they are generated by `BIBTEX` or `MIBIBTEX` (Mittelbach et al., 2004, § 12.1.3)—are to be typeset by a word processor.

4. `MultiLingual BIBTEX`.

5. `eXtensible Markup Language`. Readers interested in an introductory book to this formalism can consult Ray (2001).

2 Translations in references

Typography manuals only give a few details about citations of translations. If the only information about the original work consists of its author and title, Butcher (1992, § 10) recommends that such a reference is organised as follows:

Hesiod. *Theogony—Works and Days*, tr. M. L. West (Oxford University Press, 1988).

The original title may follow the translated title, as shown by the more expanded reference below:

Hesiod. *Theogony — Works and Days* [Θεογονία — Ἔργα καὶ ἡμέραι], translated from ancient Greek by Martin Lichtfield West (Oxford University Press, 1988).

—parentheses may be used instead of square brackets to surround the original title⁶ (Chicago, 1993, § 15.228)—what is accurate for an ancient text⁷. If we would like to give more information about the original publisher and publication date, these details may come at first:

Kenneth Robeson. *Hex*. No. 37 in *Doc Savage Series* (Bantam, June 1969); tr. Angela Campana as ‘L’autostrada stregata’, (Arnoldo Mondadori Editore, ottobre 1974).

or at second (Chicago, 1993, § 15.169):

Umberto Eco. *The Name of the Rose*. Harcourt, 1983, originally published as *Il nome della rosa* (Bompiani, 1980).

the *Chicago manual of Style* recommends that a translation of a work does not include the original edition unless the full citation of the latter is given. Of course, all these conventions and some other variations can be programmed with accurate

6. In typography, square brackets usually mark up editorial omissions or additions within texts (Butcher, 1992, § 11.5.2). Square brackets can also be used within bibliographies to surround author names when a work’s authorship is known but not revealed on the title page (Chicago, 1993, § 15.90):

Marion Zimmer Bradley [and Diana L. Paxson]. *Priestess of Avalon*. HarperCollins Publishers, 2001.

a question mark being added when the author’s identity is merely surmised:

[Mersenne Marin?] *Campanae Parisienses — Aria*. In Ottorino Respighi’s *Ancient Airs and Dances, 2nd Suite*.

7. To be complete, we should make precise the Greek form of the author’s name, i.e., ‘Hesiod [Ἡσίοδος]’, since we give the Greek title. But in this article, we will not go thoroughly into the transliteration of words written with non-Latin alphabets.

bibliography styles of BIB_T_EX (Mittelbach et al., 2004, §§ 13.5 & 13.6), once new fields related to translations are added.

3 Translations in database files

The problem we address here is related to *information redundancy*. Let us assume that we are written an article in Italian, and cite the following Italian translation of a book originally written in English:

Kenneth Robeson. *Taz*. Traduzione italiana di *Doc Savage #27, Mystery Under the Sea* (Bantam, 1968) di Bianca Russo. Arnoldo Mondadori, editore, settembre 1975.

If our text is processed by L^AT_EX and our ‘References’ section built by BIB_T_EX, the latter reference could be derived from the following entry:

```
@BOOK{robeson-it1975,
  AUTHOR = {Kenneth Robeson},
  TITLE = {Taz},
  ...
  NOTE = {Traduzione italiana...},
  ...}
```

some new fields relevant for the information about the translation may be added, provided that bibliography styles used are able to process them (Mittelbach et al., 2004, § 13.6.3).

Of course, if we write an article in English about the *Doc Savage* series, we cite the original text of this science-fiction story:

```
@BOOK{robeson1968f, ...}
```

In this way, the original title, publisher, and year of publication would be duplicated in our bibliography database (.bib) file⁸, which induces some redundancy. If there is a mistake about these fields, it must be fixed in several places: the entry for the original text and each entry specifying one of this text’s translations.

A first solution is given in Figure 1: each specification of a translation refers to the original text’s entry. If you only cite the `robeson-fr1972` or `robeson-it1975` entry, you just need an additional BIB_T_EX and two additional L^AT_EX runs since the `robeson1968f` entry is added automatically at BIB_T_EX’s first run. That may be good technique if the two translations—`robeson-fr1972a` and `robeson-it1975`—are cited, since all the information about the original text is given only once. If only the Italian translation is cited, adding a reference for the original text may be viewed as artificial increase of the ‘References’ section’s size.

8. We can use several .bib files, but the keys used throughout such files belong to the same namespace. So we can assume that there is only one .bib file, without loss of generality.

```

@BOOK{robeson1968f,
  AUTHOR = {Kenneth Robeson},
  TITLE = {Mystery Under the Sea},
  SERIES = {Doc Savage},
  NUMBER = 27,
  PUBLISHER = {Bantam},
  YEAR = 1968,
  MONTH = aug}

@BOOK{robeson-fr1972a,
  AUTHOR = {Kenneth Robeson},
  TITLE = {Le myst\`{e}re sous la mer},
  SERIES = {Doc Savage},
  NUMBER = 27,
  PUBLISHER = {Pocket Marabout},
  NOTE = {Traduction française de
    \cite{robeson1968f} par
    Claude Olivier},
  YEAR = 1972}

@BOOK{robeson-it1975,
  AUTHOR = {Kenneth Robeson},
  TITLE = {Taz},
  SERIES = {Doc Savage},
  NUMBER = 15,
  PUBLISHER = {Arnoldo Mondadori
    Editore},
  NOTE = {Traduzione italiana di
    \cite{robeson1968f} di Bianca
    Russo},
  YEAR = 1975,
  MONTH = sep}

```

FIGURE 1: Original book and two translations.

As an alternative, the Refer format⁹, recognised by T1b (Alexander, 1989), a bibliography processor designed for use with the Plain TeX typeset engine (Knuth, 1984), allows a translated work to be specified using more fields than in BibTeX, as shown in Figure 2. Let us remark that this formulation is more structured than the first version of our `robeson-it1975` entry. However, dealing with it also induces an information redundancy problem if both the original text and the Italian translation are cited throughout the same document, because the entry given in Figure 2 cannot be considered sometimes partially—that is, by ignoring the fields `%t`, `%a`, `%i`, `%s`, `%n`, `%o`, `%d`—sometimes globally when processed by a bibliography style. The same problem of information redundancy holds if several translations of a same work are to be considered.

In fact, BibTeX provides a way to share some information common to several entries, as we show it in Figure 3 with the specification of another edition of *Mystery Under the Sea*. As explained in Mittelbach et al. (2004, § 13.2.5), the spe-

9. The `pybibliographer` program can be used as a converter from the `.bib` format to the Refer format: see Mittelbach et al. (2004, § 13.4.5) for more details.

```

%A Kenneth Robeson
%T Mystery Under the Sea
%P Bantam
%S Doc Savage
%N 27
%D 1968
%t Taz
%a Bianca Russo
%i Arnoldo Mondadori Editore
%s Doc Savage
%n 15
%o Traduzione italiana di Bianca Russo
%d 1975

```

FIGURE 2: Translation’s specification in the Refer format.

cial `CROSSREF` field tells BibTeX that the missing fields of the `robeson1983cb` entry can be found within the `robeson1983c` entry. If this last entry is cross-referenced by a certain number of entries (defaulting to 2), BibTeX will automatically put it on the reference list. Otherwise, if the `robeson1983c` entry is not cited throughout the document and if only the `robeson1983cb` entry cross-references it, the information originating from the `robeson1983cb` entry—corresponding to the `AUTHOR`, `SERIES`, `PUBLISHER`, `YEAR`, and `MONTH` fields—will be directly added to the reference built from the `robeson1983cb` entry. On modern BibTeX’s versions, the `--min-crossrefs` option allows end-users to adjust this behaviour, the default setting being:

```
bibtex --min-crossrefs=2 job-name
```

`job-name` being the name of the `.aux` file processed.

Unfortunately, this kind of inheritance does not apply to translations: the translation’s title is given by the `TITLE` field, and the `TITLE` field of the original text’s entry will not be used if it is cross-referenced by the translation’s entry. When a `@PROCEEDINGS` entry is cross-referenced by some articles belonging to these proceedings, the `BOOKTITLE` field is used for the proceedings’ title—whereas the `TITLE` field stands for an article’s title—but this `BOOKTITLE` field is irrelevant for a `@BOOK` entry.

4 Future

As abovementioned, MIBibTeX is a reimplement of BibTeX with particular focus on multilingual features. Its present version could replace BibTeX, except for cross-referencing entries, that is planned for MIBibTeX’s next version¹⁰,

10. More precisely, MIBibTeX is able to process cross-referencing entries if you use the compatibility mode, allowing ‘old’ bibliography styles written in the `bst` language to be run. Whereas BibTeX requires that a cross-referenced

```
@INBOOK{robeson1983cb,
  TITLE = {Mystery Under the Sea},
  CROSSREF = {robeson1983c},
  VOLUME = 27,
  PAGES = {135--260}}

@BOOK{robeson1983c,
  AUTHOR = {Kenneth Robeson},
  TITLE = {Death in Silver---Mystery
    Under the Sea},
  SERIES = {Doc Savage},
  NUMBER = {26--27},
  PUBLISHER = {Bantam},
  YEAR = 1983,
  MONTH = nov}
```

FIGURE 3: Using a cross-reference in Bib_TE_X.

and we also plan to be able to deal with translations nicely. MIBib_TE_X's architecture has been presented in Hufflen (2006), let us just recall that parsing .bib files results in an XML tree.

Figure 4 shows the planned implementation of 'actual' cross-references among entries and translations referring to another entry: by means of two attributes, `crossref` and `translates`. We have also added language information, modelled by the `language` attribute: in the .bib files MIBib_TE_X can process, it is given by a `LANGUAGE` field.

We can notice that this specification avoids information redundancy as much as possible. In addition, when a bibliography style requires that an original edition is fully cited in its translations, we could implement the same behaviour as for 'classical' cross-references. That is, if an 'original entry' is referred by a certain number of translations, it will be automatically put in the reference list. Otherwise, the full citation of an original edition will be appended to the information related to one of its translations. Of course, this 'certain number of translations' could be controlled by an option.

Another important advantage is related to the information about natural languages used to write the different parts of a bibliographical entry. If an entry's language is `french`, the whole information is supposed to be in English, unless another language is put explicitly by means of a `foreigngroup` element. That is why we put this element in the specification of the `series` element of the `robeson-fr-1972` entry in Figure 4. This field should be specified as:

```
SERIES = {[Doc Savage] : english},
```

as part of the extended concrete syntax recog-

entry appears *after* the first entry referencing it (as we do in Figure 3), this limitation has been overcome in MIBib_TE_X's compatibility mode. On the other hand, MIBib_TE_X can be used with multilingual bibliography styles written in `nbst` (New Bibliography STyles) (Hufflen, 2003), but these styles cannot deal with cross-referencing entries presently.

```
<book id="robeson1968f" language="english">
  <author>
    <name>
      <personname>
        <first>Kenneth</first>
        <last>Robeson</last>
      </personname>
    </name>
  </author>
  <title>Mystery Under the Sea</title>
  <publisher>Bantam</publisher>
  <year>1968</year>
  <month><aug/></month>
  <number>27</number>
  <series>Doc Savage</series>
</book>

<inbook id="robeson1983ca" language="english"
  crossref="robeson1983c">
  <title>Death in Silver</title>
  <volume>26</volume>
  <pages>
    <firstpage>1</firstpage>
    <lastpage>133</lastpage>
  </pages>
</inbook>

<book id="robeson-fr1972a" language="french"
  translates="robeson1968f">
  <translator>
    <name>
      <personname>
        <first>Claude</first>
        <last>Olivier</last>
      </personname>
    </name>
  </translator>
  <title>Le mystère sous la mer</title>
  <publisher>Pocket Marabout</publisher>
  <year>1972</year>
  <number>27</number>
  <series>
    <foreigngroup language="english">
      Doc Savage
    </foreigngroup>
  </series>
</book>

<book id="robeson-it1975" language="italian"
  translates="robeson1968f">
  <translator><name>...</name></translator>
  <title>Taz</title>
  <publisher>Arnoldo Mondadori...</publisher>
  <year>1975</year>
  <month><sep/></month>
  <number>15</number>
  <series>...</series>
</book>
```

FIGURE 4: XML-like tree for translations.

nised by MIBIB_{TEX}'s parser. If the AUTHOR field was given in the `robeson-fr1972` entry, we should also make precise:

```
AUTHOR = {[Kenneth Robeson] : english},
```

in order to prevent incorrect hyphenation of these words, since the French and English rules for that are different. This information about the author belonging to the entry referred by the `translates` attributes, it is supposed to be in English since this entry, `robeson1968f`, is declared as an entry for a work in English.

Some experiments about this implementation are promising, but we have to update the bibliography styles in order for them to be able to deal with cross references and translations. We plan to propose several `nbst` bibliography styles, according to the amount of information imported from the original work's specification. As we explained in Section 2, some styles just import the authors' names, some also put the original work's title, possibly with the publisher and date of publication. We have to design some new concrete syntax for `.bib` files: two new fields, `TRANSLATES` and `TRANSLATOR`, this last field's taxonomy being the same as AUTHOR's or EDITOR's in 'classical' `BIBTEX`.

Last, let us notice that such a specification eases the search for translations if we consider XML trees and expressions belonging to XPath, the language used to address parts of an XML documents (W3C, 1999). For example, all the translations of the `robeson1968f` entry in the XML tree in Figure 4 can be caught by the XPath expression:

```
/mlbiblio/*[@translates="robeson1968f"]
```

`mlbiblio` being the root element of the trees resulting from parsing `.bib` files by MIBIB_{TEX}.

5 Conclusion

We confess that when we cited translations, we often used specifications like those in Figure 1 for a long time. And recently, we studied the meaning of the fields handled by the `Refer` format, since we wish MIBIB_{TEX} to be able to process this format in its next version. This led us to decide how to deal with `Refer` fields related to translations and to try to solve this problem of information redundancy nicer than we did before. Like cross-referencing entries, our proposal for translation specifications eases information sharing. We plan to look into other possible information sharing within bibliographies before starting implementation up.

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▷ Jean-Michel HUFFLEN
LIFC (EA CNRS 4269)
University of Franche-Comté
16, route de Gray
25030 BESANÇON CEDEX
FRANCE
hufflen@lifc.univ-fcomte.fr